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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ROUVAS, NIKOLAOS

ART UNIT PAPER NUMBER

2614

DATE MAILED: 07/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

HO

Office Action Summary

Application No.

09/390,090

Applicant(s)

LEVESQUE ET AL.

Examiner

Nikolaos Rouvas

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 10, line 1, elements 80 and 88 are improperly referenced as being part of figure 5. The examiner submits that elements 80 and 88 are part of figure 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, it is unclear as to which "two decoders" the claim refers. The claim lacks a dependency, however it appears that the claim should depend from claim 13.

Accordingly, it will be assumed that claim 14 depends from claim 13 for the art rejection below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 12, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S Patent No. 5,329,320 to Yifrach.

In regards to claims 1 and 2, Yifrach discloses a buffer system for a television receiver, which provides the user with a "Normal-Viewing Mode" (column 1, lines 40-41) which displays the input signal in real time, and a "Delayed-Viewing Mode" (column 1, line 61) which produces a time-shifted output in relation to the real-time signal . A "Freeze Mode" (column 2, lines 3-4) is also provided in one of the embodiments, where the user can choose to "freeze a portion of the broadcast" (column 4, line 35) and play it back in a delayed fashion via the "Freeze Button" and the "Playback Button" (column 4, lines 46-47).

In regards to claim 3, Yifrach discloses an embodiment with a "Fast Forward button" and a "Return button" (column 5, lines 61-62) to allow the user to fast forward or rewind to a specific portion of the received signal when he's watching it in a delayed mode.

In regards to claim 4, the reference discloses a "JB/F" button (column 3, line 29), which is used to select the viewer's desired mode of operation (real-time or delayed).

In regards to claim 5, the reference discloses an antenna used "for receiving RF signals" (column 2, lines 59-60), which then get processed by the buffer system.

In regards to claims 12, 15, and 19, Figure 1 discloses a television receiver with two paths: A real-time path as outlined by elements 11-12-13-15, and a delayed path as outlined by elements 11-12-21-22-23-24-25-13-15. Control circuitry that selects the mode of transmission is represented by elements 26 and 27, and further described in column 3, lines 28-32. Finally, the processing paths include an encoder (element 22) and a decoder (element 24).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-10, 13, 14, 16-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 5,329,320 to Yifrach.

In regards to claim 6, the examiner takes OFFICIAL NOTICE that it's notoriously well-known in the art to buffer signals input to a television receiver in order to carry out video signal processing to condition the signals for display, i.e., to compensate for signal degradation as a result of transmission, to compensate for artifacts that arise as a result of the standard used, etc. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an input frame buffer for the reasons indicated above.

In regards to claims 7, 8, and 10, Yifrach does not disclose input compressed video, a decoder to decompress the input compressed video signal, or MPEG video. However, the examiner submits that it would have been clearly obvious to one having ordinary skill in the art at the time the invention was made to modify Yifrach's receiver with the ability to receive and decode such signals so that it can operate in conjunction with a digital video distribution network employing the MPEG compression standard.

In regards to claim 9, the reference does not disclose a single codec chip that provides both operating modes. However, it would have been obvious to one having ordinary skill in the

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art at the time the invention was made to use a single codec chip in order to reduce manufacturing costs, improve efficiency, and utilize space (on the circuit board).

In regards to claims 13,14, and 16, see previous discussion about modifying Yifrach's receiver so that it can receive and decode compressed input signals. Referring to Figure 1, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Yifrach's receiver by inserting a decoder between elements 12 and 21 (so the path 11-12-21-22-23-24-25-13-15 would include two decoders) so that it could operate in conjunction with a digital video distribution network. It would have been further obvious to one having ordinary skill in the art at the time the invention was made to combine the two decoders or the encoder and decoder in a single codec chip in order to reduce manufacturing costs, improve efficiency, and utilize space (on the circuit board).

In regards to claim 17, see previous discussion regarding claim 6, where buffers are commonly used in television receivers to compensate for signal degradation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a common memory for the buffers in order to minimize cost, and utilize buffer space.

In regards to claim 18, Yifrach discloses his system as being part of a television receiver. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Yifrach's teachings in a set-top box in order to be able to provide service to viewers in a video distribution system that uses set-top boxes.

In regards to claim 20, the reference does not disclose a set-top box, a compressed digital video input, a real-time decoder coupled to the input, or a frame storage system coupled to the input. The reason a set-top box would be used has been stated in the preceding paragraph. It

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would have also been obvious to one having ordinary skill in the art at the time the invention was made to use a compressed digital video input and a real-time decoder coupled to the input, so that the system could operate in conjunction with a digital video distribution network. It would have been further obvious to one having ordinary skill in the art at the time the invention was made to use a frame storage system coupled to the input in order to use it as a means for retrieving desirable frames at a later time.

In regards to claim 21, the reference does not disclose a frame buffer or a frame storage system. However, as explained previously, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use frame buffers in order to compensate for signal degradation as a result of transmission and to use a frame storage system as a means for retrieving desirable frames at a later time.

In regards to claim 22, the same reasons for rejecting claim 20 are applied here. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use both a compressed digital and an uncompressed video input so that so that the system could operate in conjunction with a digital or an analog video distribution network.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yifrach in further view of U.S. Patent No. 5,701,383 to Russo et al. Yifrach does not disclose any means for identifying the paused frame, but Russo et. al discloses means for storing information relating to a specific point in a program when a "PAUSE command" (column 3, lines 10-11) is received, or, in another embodiment, when a "MARK command" (column 3, line 48) is issued and used along with "Marker memory" (column 8, line 20) where information regarding program markers is stored, to specify a point from which playback can be resumed. Therefore, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to use such means as the ones explained above for purposes of indexing frames.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ikeda (6,240,244) discloses a disk apparatus capable of simultaneous playback and recording. His apparatus comprises of MPEG encoders and decoders, buffers, and a controller circuit.

Sasaki (6,226,447) discloses a video apparatus, which can simultaneously playback and record. His system comprises of MPEG encoders and decoders, buffers, RAM memory, and a system controller. Trick functions can be employed during the time-shifted mode.

Pijnenburg et al. (6,169,842) discloses a system for simultaneous playback and recording. His system comprises of a buffer, a system controller, and an MPEG-2 compressor. Upon depression of the "Pause key" (column 3, line 56) the system starts recording, and depression of the "Resume" key (column 3, line 59) resumes playback from the point where the program was paused. VCR-like functions are available to the user.

Inoue et al. (5,990,881) discloses a video-on-demand receiver, which comprises of buffers, a controller, and an MPEG decoder. The receiver stores the video after a pause command is issued so that it can be later retrieved.

Thomason et al. (6,018,612) discloses an arrangement for storing and retrieving signals using controllers, ROM and RAM memory, and input and output buffers combined into a single buffer memory.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Nikolaos Rouvas** whose telephone number is **(703) 305-6955**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


JOHN MILLER
SUPERVISORY PATENT EXAMINER
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